



Formerly Known As: Shell Delima Oils

Shell Paper Machine Oil S2 M 220

- *Reliable Protection*
- *Water Shedding*
- *Long Life*

Paper Machine Circulating Oil

Shell Paper Machine Oil S2 M is a high performance oil designed to provide excellent all round protection for the diverse needs and conditions found in paper machines.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Good oil life – Maintenance Saving**

Shell Paper Machine Oil S2 M oil has been designed to resist breakdown under high temperatures and in the presence of water. This helps provide long oil life capability and helps protect against the formation of harmful deposits.

- **Reliable wear & corrosion protection**

Shell Paper Machine Oil S2 M uses a well proven zinc-based anti-wear system to provide reliable protection against wear.

- **Maintaining system efficiency**

Excellent water separation and air release helps in conjunction with high quality base oils helps ensure the efficient lubrication of the machines and systems.

Shell Paper Machine Oil S2 M is also suitable for use with fine filtration to help ensure effective contaminant free lubrication to critical machine parts.

- Bulk oil temperatures should not exceed 70°C. It is specifically designed for:
- Lubrication of bearings in the (drying) section of paper machines
- Hydraulic and lubrication systems in deflection-compensating rolls
- Enclosed gears not requiring full EP performance.

Specifications, Approvals & Recommendations

- DIN 51517-2 – type 2
- FZG load stage 12 (DIN 51354)

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

Compatibility & Miscibility

- **Seal & Paint Compatibility**

Shell Paper Machine Oil S2 M is compatible with seal materials and paints normally specified for use with mineral oils.

Main Applications



- **Paper machine applications**

Shell Paper Machine Oil S2 M has been used extensively within the paper and pulp industry and is proven to deliver effective lubrication and protection in both the wet areas of machine application and the high temperature dry areas.

Typical Physical Characteristics

Properties			Method	Paper Machine Oil S2 M 220
Kinematic Viscosity	@40°C	mm ² /s	ASTM D445	220
Kinematic Viscosity	@100°C	mm ² /s	ASTM D445	18.7
Viscosity Index			ISO 2909	95
Density	@15°C	kg/m ³	ISO 12185	900
Flash Point (COC)		°C	ISO 2592	265
Pour Point		°C	ISO 3016	-9
Emulsion Test		Mins	ASTM D1401	10
Air Release		Mins	ASTM D3427	14.3
Timken, OK Load		lbs	ASTM D2782	40
Viscosity Grade			ISO 3448	220

These characteristics are typical of current production. While future production will conform to Shell's specification, variations in these characteristics may occur.

Health, Safety & Environment

- **Health & Safety**

Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from <http://www.epc.shell.com>

- **Protect the Environment**

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- **Advice**

Product recommendations for applications and specifications not covered here may be obtained from your Shell representative.

Viscosity - Temperature Diagram for Shell Paper Machine Oil S2 M

